REMARKS/ARGUMENTS

Prior to entry of the present Amendment, claims 1-20 are pending. In the present Amendment, claims 1, 3-10 and 12-19 are amended, and claims 2, 11 and 20 are cancelled without prejudice. New claims 21-22 are added. No new matter is added.

Examiner's Interview

Applicants appreciate the Examiners' time and consideration during the Interview held on February 3, 2009. During the Interview, Applicants' representative and Examiners Moorer and Yu discussed claims 1, 3-5, 7, 9-10, 12-15 and 19 and proposed new claims 21-22 and the teachings of the prior art, U.S. Patent Nos. 5,005,904 ("Clemens") 4,175,297 ("Robbins"). As discussed in the Examiner's Interview Summary prepared by Examiner Moorer and below in more detail, Applicants' representative provided arguments as to why the claims meet the requirements of 35 U.S.C. §§ 101 and 112 and as to why the cited prior art does not teach or suggest the subject matter of the claims. However, agreement was not reached on the claims.

Amendments to the Specification

The Examiner objected to the Title. Applicants have amended the Title as suggested by the Examiner.

The Examiner objected to paragraph [0040] for an informality. Applicants have amended paragraph [0040] as suggested by the Examiner.

In view of the foregoing, Applicants respectfully request withdrawal of the objections to the specification

Claim Rejections under 35 U.S.C. §101

The Examiner rejected claims 1-9 under 35 U.S.C. §101 as being an improper process claim. As discussed during the Examiner's Interview, claims 1-9 have been amended to recite acts of the method. Accordingly, Applicants respectfully submit that claims 1-9 recite a proper method and request reconsideration of the rejections under 35 U.S.C. §101.

Claim Rejections under 35 U.S.C. §112

The Examiner rejected claims 1-20 under 35 U.S.C. §112, second paragraph, as being indefinite, for the reasons set forth in sections 6-8 of the Office action.

The Examiner noted that the term "recipient" was used interchangeably with the term "cushion" in the claims. Applicants have amended claims 1, 3 and 9 to replace the term "cushion" with the term "recipient" so that the term "recipient" is used consistently in the claims.

The Examiner indicated that it is unclear what is meant by "pressure medium flow". As agreed to during the Interview, Applicants have amended claims 1, 8, 10 and 13-16 to recite a "flow of pressure medium".

As discussed during the Interview, Applicants note that the Examiner has correctly interpreted the terms "alternating manner" and that the term is clear.

As discussed during the Interview, Applicants note that the Examiner has correctly interpreted the terms "pressure side" and "suction side" of the feed pump and that these terms are clear.

As discussed during the Interview, the term "vane-cell pump" is better translated as "vane-type pump" or "fly pump", and Applicants have amended claim 17 accordingly. As also discussed during the Interview, Applicants note that the term defines a type of pump and does not define that the rotational direction of the pump can be reversed.

Applicants have amended claim 6 to correct the antecedent basis issue.

With respect to the Examiner's issue with the term "means", as discussed during the Interview, Applicants have amended claims 10 and 15-16.

In view of the foregoing, Applicants respectfully submit that claims 1-20 are definite and request reconsideration of the rejections under 35 U.S.C. §112, second paragraph.

Claim Rejections under 35 U.S.C. §102

The Examiner rejected claims 1-2, 5-14 and 20 under 35 U.S.C. §102 as being anticipated by Clemens. Also, the Examiner rejected claims 1-5, 7-8 and 10-19 as being anticipated by Robbins. Reconsideration of the rejections is respectfully requested.

Independent Claim 1

Independent Claim 1 defines a method to act upon at least two recipients (10, 11, 12) of a pneumatic system in an alternating manner, with a flow of pressure medium, the method comprising providing at least one, first recipient (10, 11, 12) and at least one other, second recipient (10, 11, 12), filling the at least one, first recipient (10, 11, 12) with a gaseous working fluid, while actively suctioning off working fluid from the at least one other, second recipient (10, 11, 12), and wherein the filling act includes using working fluid from the at least one other, second recipient (10, 11, 12) to fill the at least one, first recipient (10, 11, 12).

Clemens discloses a system for inflating a support bag in a seat. Bags 1, 2 are incorporated into a vehicle seat. The bag 1 is connected by tubing 3 to a pump 4, and the bag 2 is connected by separate tubing 3 to a separate pump 4. Each pump 4 has a solenoid valve 6 on the pump outlet to vent the pressure in the associated bag 1 or 2 to atmosphere as the bag 1 or 2 is deflated. A control system including a control circuit and user operated switches 8, 9, 10 controls inflation and deflation of the bags 1 and 2.

As discussed during the Interview, Clemens does not teach or suggest, among other things, a method including filling the at least one, first recipient with a gaseous working fluid, while actively suctioning off working fluid from the at least one other, second recipient, and wherein the filling act includes using working fluid from the at least one other, second recipient to fill the at least one, first recipient. Rather, in Clemens, the pressure from one bag (e.g., bag 2) is not used to fill the other bag (e.g., bag 1) and vice versa. Instead, the pressure from the bag (e.g., bag 2) is vented to atmosphere through the solenoid valve 6 on the outlet of the associated pump 4.

For at least this independent reason, Clemens does not teach or suggest each and every element of independent claim 1.

Robbins discloses an inflatable pillow support. The pillow 10 includes a first set of inflatable pockets 20*a* and a second set of inflatable pockets 20*b*. A tube 26 connects the first inflatable pockets 20*a* to a valve 30, and a tube 28 connects the second inflatable pockets 20*b* to the valve 30. A tube 32 connects the output of a pump 40 (exhaust valves 44 and 55) to the valve 30, and the input of the pump 40 (inlet valves 43 and 54) are at atmosphere.

In Robbins, control circuitry 60 positions the valve 30. In one position, the valve 30 is positioned to inflate the first inflatable pockets 20*a* and exhausting pressure from the second

inflatable pockets 20*b* to atmosphere through the exhaust (adjusted by screw 36). In the opposite position, the valve 30 is positioned to inflate the second inflatable pockets 20*b* and exhausting pressure from the first inflatable pockets 20*a* to atmosphere through the exhaust (adjusted by screw 34).

As discussed during the Interview, Robbins does not teach or suggest, among other things, a method including filling the at least one, first recipient with a gaseous working fluid, while actively suctioning off working fluid from the at least one other, second recipient, and wherein the filling act includes using working fluid from the at least one other, second recipient to fill the at least one, first recipient. Rather, in Robbins, the pressure from one set of inflatable pockets (e.g., second inflatable pockets 20*b*) is not used to inflate the other set of inflatable pockets (e.g., first inflatable pockets *20a*) and vice versa. Instead, the pressure from the set of inflatable pockets (e.g., second inflatable pockets 20*b*) is vented to atmosphere through the exhaust (screw 36).

For at least this independent reason, Robbins does not teach or suggest each and every element of independent claim 1.

For at least these independent reasons, Applicants respectfully submit that Clemens and Robbins, alone or in combination, do not teach or suggest the subject matter defined independent claim 1. Accordingly, independent claim 1 is allowable.

Dependent claims 3-9 depend from independent claim 1 and are allowable for at least the same and other independent reasons. In addition, the additional subject matter defined by the dependent claims, such as, for example, dependent claims 3, 7 and 9, provide separate, independent bases for allowance.

Dependent claim 3 defines the method as further comprising filling the at least one other, second recipient (10, 11, 12) with a gaseous working fluid, while actively suctioning off the working fluid from the at least one, first recipient (10, 11, 12) to provide alternating filling of at least two recipients (10, 11, 12), wherein the alternating filling is achieved by a reversal of a rotational direction of a feed pump (22) conveying the working fluid. As discussed during the Interview, neither Clemens nor Robbins teach or suggest reversing the rotational direction of a pump 4 to provide alternating filling. In Clemens, a bag (e.g., 1) is filled by the associated pump 4 while the other bag (e.g., 2) is vented through its associated pump 4 and solenoid valve 6 and vice versa. In Robbins, a set of inflatable pockets (e.g., first inflatable pockets 20*a*) is

inflated by the pump 40 while the other set of inflatable pockets (e.g., second inflatable pockets 20*b*) is exhausted to atmosphere. Accordingly, claim 3 defines additional allowable subject matter.

Dependent claim 7 specifies that the act of presetting includes presetting the final pressure in the at least one, first recipient (10, 11, 12) and/or the frequency of the working fluid acting upon the at least two recipients (10, 11, 12) in an alternating manner by a control unit (93) in accordance with signals of a sensor to detect occupation of a seat. As discussed during the Interview, neither Clemens nor Robbins discloses a sensor to detect occupation of a seat or presetting by a control unit in accordance with signals from such a sensor. Accordingly, claim 7 defines additional allowable subject matter.

Dependent claim 9 defines the method as further comprising controlling or regulating the final pressure in the at least one, first recipient (10, 11, 12) and/or the frequency of the working fluid acting upon the at least two recipients (10, 11, 12) in an alternating manner by actuating a bypass (32) between a suction side (18) and a pressure side (20) of a feed pump (22). Neither Clemens nor Robbins discloses a bypass between a suction side and a pressure side of a pump or controlling or regulating by actuating such a bypass. Accordingly, claim 9 defines additional allowable subject matter.

Independent Claim 10

Independent claim 10 defines a pneumatic circuit to act upon recipients (10, 11, 12) of a pneumatic system in an alternating manner, with a flow of pressure medium, at least one, first recipient (10, 11, 12) and at least one, second recipient (10, 11, 12) to alternatingly receive a flow of pressure medium, at least one feed pump (22) conveying the flow of pressure medium, means (24) for driving the feed pump (22), and connecting means (14, 16, 18, 20, 88, 90, 94, 96, 98) for conducting working fluid between the feed pump (22) and the at least one, first recipient (10, 11, 12) and the at least one, second recipient (10, 11, 12), characterized in that the at least one, first recipient (10, 11, 12) is connected to the at least one, second recipient (10, 11, 12) via the connecting means (14, 16, 18, 20, 88, 90, 94, 96, 98) and the feed pump (22), and characterized in that the at least one, first recipient (10, 11, 12) and the at least one, second recipient (10, 11, 12) are connected to the at least one feed pump (22) via the connecting means

(14, 16, 18, 20, 88, 90, 94, 96, 98) such that working fluid pumped out of the at least one, second recipient (10, 11, 12) is supplied to the at least one, first recipient (10, 11, 12).

As discussed during the Interview, Clemens does not teach or suggest, among other things, a pneumatic circuit including connecting means for conducting working fluid between the feed pump and the at least one, first recipient and the at least one, second recipient. Rather, in Clemens, tubing 3 conducts fluid between one pump 4 and bag 1, and separate tubing 3 conducts fluid between a separate pump 4 and the bag 2.

Clemens also does not teach or suggest that the at least one, first recipient and the at least one, second recipient are connected to the at least one feed pump via the connecting means such that working fluid pumped out of the at least one, second recipient is supplied to the at least one, first recipient. Rather, in Clemens, the pressure from one bag (e.g., bag 2) is not supplied to the other bag (e.g., bag 1) and vice versa. Instead, the pressure from the bag (e.g., bag 2) is vented to atmosphere through the solenoid valve 6 on the outlet of the associated pump 4.

For at least these independent reasons, Clemens does not teach or suggest each and every element of independent claim 10.

As discussed during the Interview, Robbins does not teach or suggest, among other things, a pneumatic circuit in which the at least one, first recipient and the at least one, second recipient are connected to the at least one feed pump via the connecting means such that working fluid pumped out of the at least one, second recipient is supplied to the at least one, first recipient.. Rather, in Robbins, the pressure from one set of inflatable pockets (e.g., second inflatable pockets 20*b*) is not supplied to the other set of inflatable pockets (e.g., first inflatable pockets *20a*) and vice versa. Instead, the pressure from the set of inflatable pockets (e.g., second inflatable pockets 20*b*) is vented to atmosphere through the exhaust (screw 36).

For at least this independent reason, Robbins does not teach or suggest each and every element of independent claim 10.

For at least these independent reasons, Applicants respectfully submit that Clemens and Robbins, alone or in combination, do not teach or suggest the subject matter defined by independent claim 10. Accordingly, independent claim 10 is allowable.

Dependent claims 12-19 depend from independent claim 10 and are allowable for at least the same and other independent reasons. In addition, the additional subject matter defined by the

dependent claims, such as, for example, dependent claims 12-15 and 19, provide separate, independent bases for allowance.

Dependent claim 12 specifies that a suction side (18) of the at least one feed pump (22) is connected to the at least one, first recipient (10, 11, 12), while a pressure side (20) of the at least one feed pump (22) is simultaneously connected to the at least one, second recipient (10, 11, 12). Neither Clemens nor Robbins teach or suggest the claimed connection. In Clemens, the pressure side of one pump 4 is connected to the associated bag 1, and the pressure side of the other separate pump 4 is connected to the associated bag 2. In Robbins, the pressure side of the pump 40 is connected through the valve 30, in one position, to one set of inflatable pockets (e.g., first inflatable pockets 20*a*) and, in the opposite position, to the other set of inflatable pockets (e.g., second inflatable pockets 20*b*). In Robbins, the suction side of the pump 40 (inlet valves 43 and 54) is at atmosphere. Accordingly, claim 12 defines additional allowable subject matter.

Dependent claim 13 specifies that a suction side (18) of the at least one feed pump (22) is connected to the at least one, first recipient (10, 11, 12) via a component (36, 100, 102, 104) controlling the flow of pressure medium, while a pressure side (20) of the at least one feed pump (22) is simultaneously connected to the at least one, second recipient (10, 11, 12). Neither Clemens nor Robbins teach or suggest the claimed connection. In Clemens, the pressure side of one pump 4 is connected to the associated bag 1, and the pressure side of the other separate pump 4 is connected to the associated bag 2. In Robbins, the suction side of the pump 40 (inlet valves 43 and 54) is at atmosphere. In Robbins, the pressure side of the pump 40 is connected through the valve 30, in one position, to one set of inflatable pockets (e.g., first inflatable pockets 20*a*) and, in the opposite position, to the other set of inflatable pockets (e.g., second inflatable pockets 20*b*). Accordingly, claim 13 defines additional allowable subject matter.

Dependent claim 14 further specifies that the pressure side (20) of the at least one feed pump (22) is also connected to the component (36, 100, 102, 104) controlling the flow of pressure medium. Neither Clemens nor Robbins teach or suggest the claimed connection. Accordingly, claim 14 defines additional allowable subject matter.

Dependent claim 15 specifies that the component (36, 100, 102, 104) controlling the flow of pressure medium features a pneumatically driven actuator (36, 100, 102, 104). Neither Clemens nor Robbins teach or suggest the claimed pneumatically driven actuator. In Clemens, control circuit 7 controls the pumps 4 to operate. In Robbins, the valve 30 is an electric valve

controlled by the control circuitry 60. Accordingly, claim 15 defines additional allowable subject matter.

Dependent claim 19 specifies that the pneumatic circuit features at least one sensor element (95), which acquires information about the occupation of a seat and transmits the information to a control unit (93) for the pneumatic circuit. As discussed during the Interview, neither Clemens nor Robbins discloses a sensor element which acquires information about occupation of a seat and transmits the information to a control unit. Accordingly, claim 19 defines additional allowable subject matter.

New Independent Claim 21

New independent claim 21 defines a method to act upon at least two recipients (10, 11, 12) of a pneumatic system in an alternating manner, with a flow of pressure medium, the method comprising providing at least one, first recipient (10, 11, 12) and at least one other, second recipient (10, 11, 12), filling the at least one, first recipient (10, 11, 12) with a gaseous working fluid, while actively suctioning off the working fluid from the at least one other, second recipient (10, 11, 12), filling the at least one other, second recipient (10, 11, 12) with a gaseous working fluid, while actively suctioning off the working fluid from the at least one, first recipient (10, 11, 12) to provide alternating filling of at least two recipients (10, 11, 12), wherein the alternating filling is achieved by a reversal of a rotational direction of a feed pump (22) conveying the working fluid.

As discussed during the Interview, Clemens does not teach or suggest, among other things, a method in which alternating filling is achieved by a reversal of a rotational direction of a feed pump conveying the working fluid. Clemens does not teach or suggest that either pump 4 is reversible to provide alternating filling of the bags 1, 2. In Clemens, a bag (e.g., 1) is filled by the associated pump 4 while the other bag (e.g., 2) is vented through its associated pump 4 and solenoid valve 6 and vice versa.

For at least this independent reason, Clemens does not teach or suggest each and every element of independent claim 21.

As discussed during the Interview, Robbins does not teach or suggest, among other things, a method in which alternating filling is achieved by a reversal of a rotational direction of a feed pump conveying the working fluid. Robbins does not teach or suggest that the pump 40 is

reversible to provide alternating filling of the inflatable pockets 20*a*, 20*b*. In both directions of the pump 40, pressure is supplied through tube 32 to inflate a set of inflatable pockets (20*a* or 20*b*). In Robbins, a set of inflatable pockets (e.g., first inflatable pockets 20*a*) is inflated by the pump 40 while the other set of inflatable pockets (e.g., second inflatable pockets 20*b*) is exhausted to atmosphere.

For at least this independent reason, Robbins does not teach or suggest each and every element of independent claim 21.

For at least these independent reasons, Applicants respectfully submit that Clemens and Robbins, alone or in combination, do not teach or suggest the subject matter defined by new independent claim 21. Accordingly, independent claim 21 is allowable.

New Independent Claim 22

New independent claim 22 defines a vehicle seat assembly comprising at least one, first recipient (10, 11, 12) and at least one, second recipient (10, 11, 12) integrated into the seat, the at least one, first recipient (10, 11, 12) and the at least one, second recipient (10, 11, 12) to alternatingly receive a flow of pressure medium, at least one feed pump (22) conveying the flow of pressure medium, means (24) for driving the at least one feed pump (22), and connecting means (14, 16, 18, 20, 88, 90, 94, 96, 98) for conducting working fluid between the at least one feed pump (22) and the at least one, first recipient (10, 11, 12) and the at least one, second recipient (10, 11, 12), characterized in that the at least one, first recipient (10, 11, 12) is connected to the at least one, second recipient (10, 11, 12) via the connecting means (14, 16, 18, 20, 88, 90, 94, 96, 98) and the at least one feed pump (22), and characterized in that the at least one, first recipient (10, 11, 12) and the at least one, second recipient (10, 11, 12) are connected to the at least one feed pump (22) via the connecting means (14, 16, 18, 20, 88, 90, 94, 96, 98) such that the working fluid pumped out of the at least one, second recipient (10, 11, 12) is supplied to the at least one, first recipient (10, 11, 12).

As discussed during the Interview, Clemens does not teach or suggest, among other things, a vehicle seat including connecting means for conducting working fluid between the feed pump and the at least one, first recipient and the at least one, second recipient. Rather, in Clemens, tubing 3 conducts fluid between one pump 4 and bag 1, and separate tubing 3 conducts fluid between a separate pump 4 and the bag 2.

Clemens also does not teach or suggest that the at least one, first recipient and the at least one, second recipient are connected to the at least one feed pump via the connecting means such that working fluid pumped out of the at least one, second recipient is supplied to the at least one, first recipient. Rather, in Clemens, the pressure from one bag (e.g., bag 2) is not supplied to the other bag (e.g., bag 1) and vice versa. Instead, the pressure from the bag (e.g., bag 2) is vented to atmosphere through the solenoid valve 6 on the outlet of the associated pump 4.

For at least these independent reasons, Clemens does not teach or suggest each and every element of independent claim 22.

As discussed during the Interview, Robbins does not teach or suggest, among other things, a vehicle seat in which the at least one, first recipient and the at least one, second recipient are connected to the at least one feed pump via the connecting means such that working fluid pumped out of the at least one, second recipient is supplied to the at least one, first recipient.. Rather, in Robbins, the pressure from one set of inflatable pockets (e.g., second inflatable pockets 20*b*) is not supplied to the other set of inflatable pockets (e.g., first inflatable pockets *20a*) and vice versa. Instead, the pressure from the set of inflatable pockets (e.g., second inflatable pockets 20*b*) is vented to atmosphere through the exhaust (screw 36).

For at least this independent reason, Robbins does not teach or suggest each and every element of independent claim 22.

For at least these independent reasons, Applicants respectfully submit that Clemens and Robbins, alone or in combination, do not teach or suggest the subject matter defined by new independent claim 22. Accordingly, independent claim 22 is allowable.

CONCLUSION

In view of the foregoing, Applicants respectfully request entry of the present Amendment and allowance of Claims 1, 3-10, 12-19 and 21-22.

If additional consultation will further prosecution, the undersigned is available during normal business hours at the below-identified telephone number.

Respectfully submitted,

/Edward R. Lawson Jr./

Edward R. Lawson Jr.
Reg. No. 41,931

Docket No. 022862-1060-00 (formerly 081276-1060-00)
Michael Best & Friedrich LLP
100 East Wisconsin Avenue
Suite 3300
Milwaukee, Wisconsin 53202-4108
414.271.6560